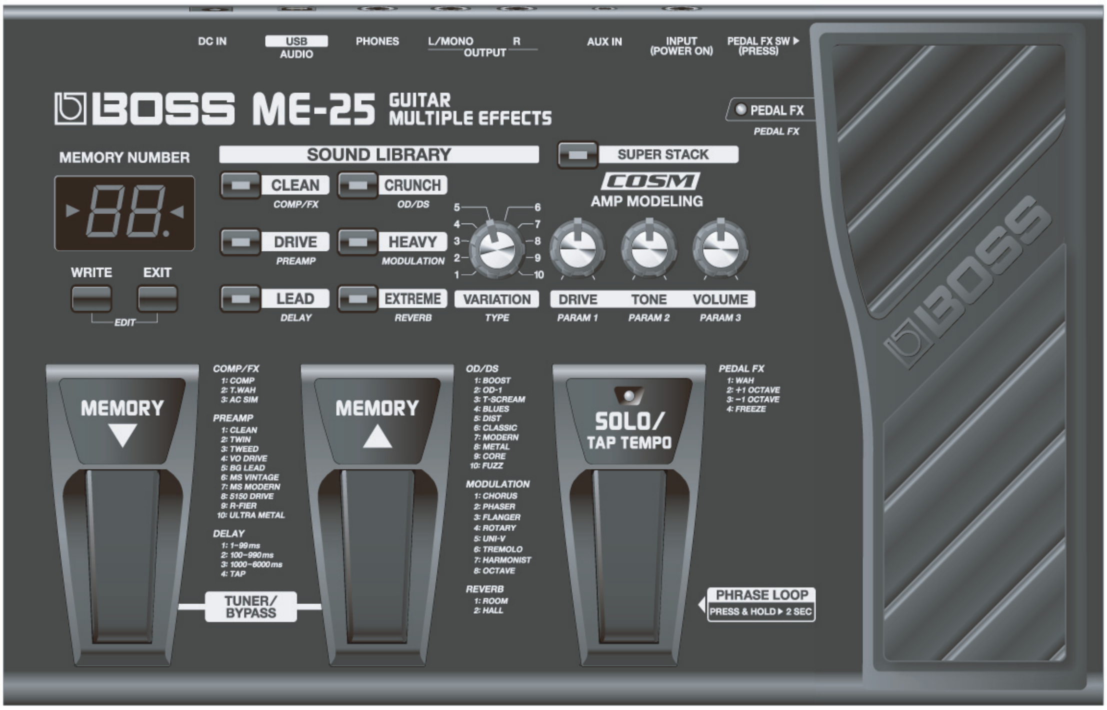
ME-25

GUITAR MULTIPLE EFFECTS

SERVICE NOTES

Issued by RJA

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Cautionary Notes

Before beginning the procedure, please read through this document. The matters described may differ according to the model.

No Power Switch

The power to the ME-25 comes on when a plug is connected to the **INPUT** jack. Before making the connection, be sure to lower the volume level on the equipment you're connecting it to (amp, speaker, or the like).

Back Up User Data!

User data may be lost during the course of the procedure. Refer to "**Data Backup and Restore Operations**" (p. 11) in the Service Notes and save the data. After completing the procedure, restore the backed-up data to the product.

Parts List

A component whose part code is ******** will not be supplied as a service part because one of the following reasons applies.

- Because it is supplied as an assembled part (under a different part code).
- Because a number of circuit boards are grouped together and supplied as a single circuit board (under a different part code).
- Because supply is prohibited due to copyright restrictions.
- Because reissuance is restricted.
- Because the part is made to order (at current market price).
- Because it is carried in electronic data on the Roland web site.
- Because it is a package or an accessory irrelevant to the function maintenance of the main body.
- Because it can be replaced with an article on the market. (battery or etc.)

Circuit Diagram

In the circuit diagram, "NIU" is an abbreviation for "Not in Use," and "UnPop" is an abbreviation for "Unpopulated." They both mean non-mounted components. The circuit board and circuit board diagram show silk-screened indications, but no components are mounted.

Expression-pedal Calibration

NOTE

Expression-pedal calibration in the User Mode (Owner's Manual p. 12) must not be executed on a user's ME-25 in your care. When executing this, be sure either to carry out the procedure described below, or to carry out execution in the Test Mode. Executing this in the User Mode overwrites the calibration record.

> The ME-25 records the expression-pedal calibration history. Executing this in the User Mode overwrites the calibration value left by the user.
> If the pedal operates in an unexpected way, examining the calibration history may allow determination of a problem in the factory-default calibration or in calibration performed by the user.

1. Adjust all knobs to their minimum settings.
2. Hold down [WRITE], [CLEAN], and [EXTREME] and insert the plug into the **INPUT** jack.
3. When **--** appears on the 7-segment LED display, press [EXIT] five times.
   The message **EP** appears on the 7-segment LED display.
4. Press [WRITE].
   The message **Pd** appears on the 7-segment LED display for about two seconds, after which **UP** appears and dots is displayed.
   Left dot: This indicates that calibration was executed when the unit was shipped from the factory.
   Right dot: This indicates that calibration has been executed by the user one or more times.

* *This history cannot be reset.*

Continue with execution of expression-pedal calibration. Follow the procedure shown below. To quit before completion, detach the plug from the **INPUT** jack to switch off the power.

5. While **UP** is shown on the 7-segment LED display, depress the heel side of the expression pedal all the way and press [WRITE].
   The position information for the expression pedal is recorded, and then **dn** is displayed.
6. Depress the toe side of the expression pedal all the way and press [WRITE].
   The position information for the expression pedal is recorded, and then **5** is displayed.

* *This **5** is the sensitivity of the expression-pedal switch. It is set to **5** by default.*

7. Depress the toe side of the expression pedal more forcefully and verify that the **PEDAL FX** LED lights up.
8. Again depress the toe side of the expression pedal forcefully and verify that the **PEDAL FX** LED goes dark.
9. Press [EXIT] and detach the plug from the **INPUT** jack.
   The power is switched off.

Factory Reset

NOTE

A Factory Reset in the User Mode (Owner's Manual p. 12) must not be executed on a user's ME-25 in your care. When executing this, be sure to follow the procedure in **Performing a Factory Reset** (p. 11).

> The ME-25 records the factory-reset history. Executing a Factory Reset in the User Mode overwrites the calibration value left by the user.
> If the pedal operates in an unexpected way, examining the calibration history may allow determination of a problem in the factory-default calibration or in calibration performed by the user.

Important Notes on Entering the Test Mode for Service

To enter the Test Mode for service, hold down [WRITE] and [EXTREME] and insert a plug into the **INPUT** jack.
Holding down [WRITE] and [CRUNCH] by mistake and inserting the plug enters the Test Mode for factory-default inspection. In many cases, execution proceeds unchanged for some time without this being noticed, but using the Test Mode for factory-default inspection is impossible without special tools.

Specifications

ME-25: Guitar Multiple Effects

AD Conversion

24-bit + AF method

* *AF method (Adaptive Focus method)*
This is a proprietary method from Roland & BOSS that vastly improves the signal-to-noise (S/N) ratio of the A/D and D/A converters.

DA Conversion

24-bit

Sampling Frequency

44.1 kHz

Memory

60

Sound Library

60

Category of the Sound Library

CLEAN
CRUNCH
DRIVE
HEAVY
LEAD
EXTREME

Effect Type

- COMP/FX
  - COMP
  - T.WAH
  - AC SIM
- OD/DS
  - BOOST
  - OD-1
  - T-SCREAM
  - BLUES
  - DIST
  - CLASSIC
  - MODERN
  - METAL
  - CORE
  - FUZZ
- PREAMP
  - CLEAN
  - TWIN
  - TWEED
  - VO DRIVE
  - BG LEAD
  - MS VINTAGE
  - MS MODERN
  - 5150 DRIVE
  - R-FIER
  - ULTRA METAL
- MODULATION
  - CHORUS
  - PHASER
  - FLANGER
  - ROTARY
  - UNI-V
  - TREMOLO
  - HARMONIST
  - OCTAVE
- DELAY
  - 1-99ms
  - 100-990ms
  - 1000-6000ms
  - TAP
- REVERB
  - ROOM
  - HALL
- PEDAL FX
  - WAH
  - +1 OCTAVE
  - -1 OCTAVE
  - FREEZE
- NS

Connectors

INPUT jack (1/4 inch phone type)
OUTPUT jacks L/MONO, R (1/4 inch phone type)
PHONES jack (Stereo 1/4 inch phone type)
AUX IN jack (Stereo Mini type)
USB connector
DC IN jack (DC9V)

Nominal Input Level

INPUT: -10 dBu
AUX IN: -18 dBu

Input Impedance

INPUT: 1MΩ
AUX IN: 22kΩ

Nominal Output Level

-10 dBu

Output Impedance

2kΩ

Display

7 segments, 2 digits LED

Power Supply

DC 9 V
Dry Batteries (R6/LR6(AA) type) x 6 or
AC Adaptor (BOSS PSA series: sold separately)

Current Draw

150 mA

* *Expected battery life under continuous use:*
  Alkaline: 9 hours
  Carbon: 3 hours
  (These figures will vary depending on the actual conditions of use.)

Dimensions

300 (W) x 191 (D) x 72 (H) mm
11-13/16 (W) x 7-9/16 (D) x 2-7/8 (H) inches

Maximum height

300 (W) x 191 (D) x 93 (H) mm
11-13/16 (W) x 7-9/16 (D) x 3-11/16 (H) inches

Weight

1.9 kg / 4 lbs 4 oz (including batteries)

Accessories

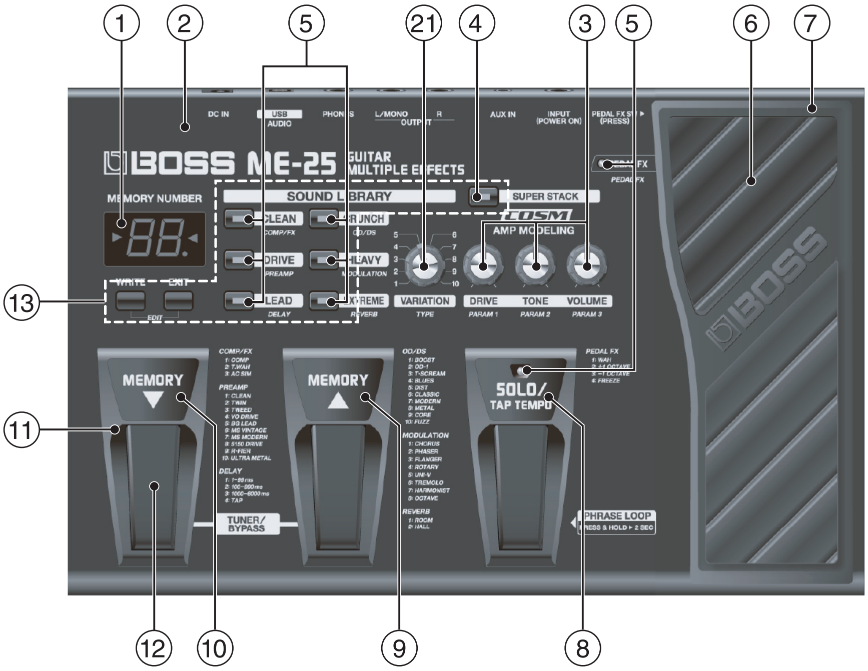
Owner's Manual (#5100011936)
ME-25 DVD-ROM (#********)
Sound Library/Memory List (Leaflet) (#********)
Sound Library Sticker (#********)
Dry Batteries (Alkaline: LR6 (AA) type) x 6 (#********)
Roland Service (Information Sheet) (#********)

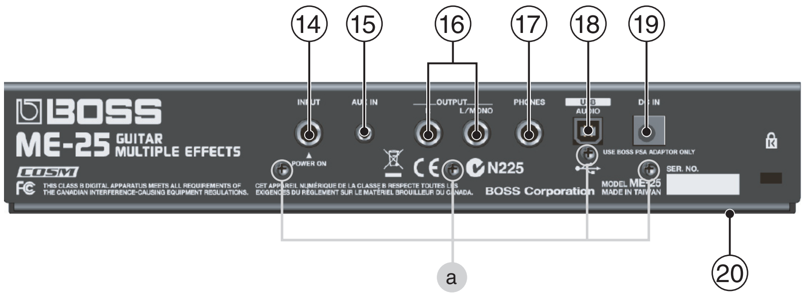
Options

AC Adaptor: BOSS PSA series

* *0 dBu = 0.775 Vrms*
* *Printed matters will not be supplied after the end of the production. Then, download the electronic file from the Roland web site.*
* *In the interest of product improvement, the specifications and/or appearance of this unit are subject to change without prior notice.*

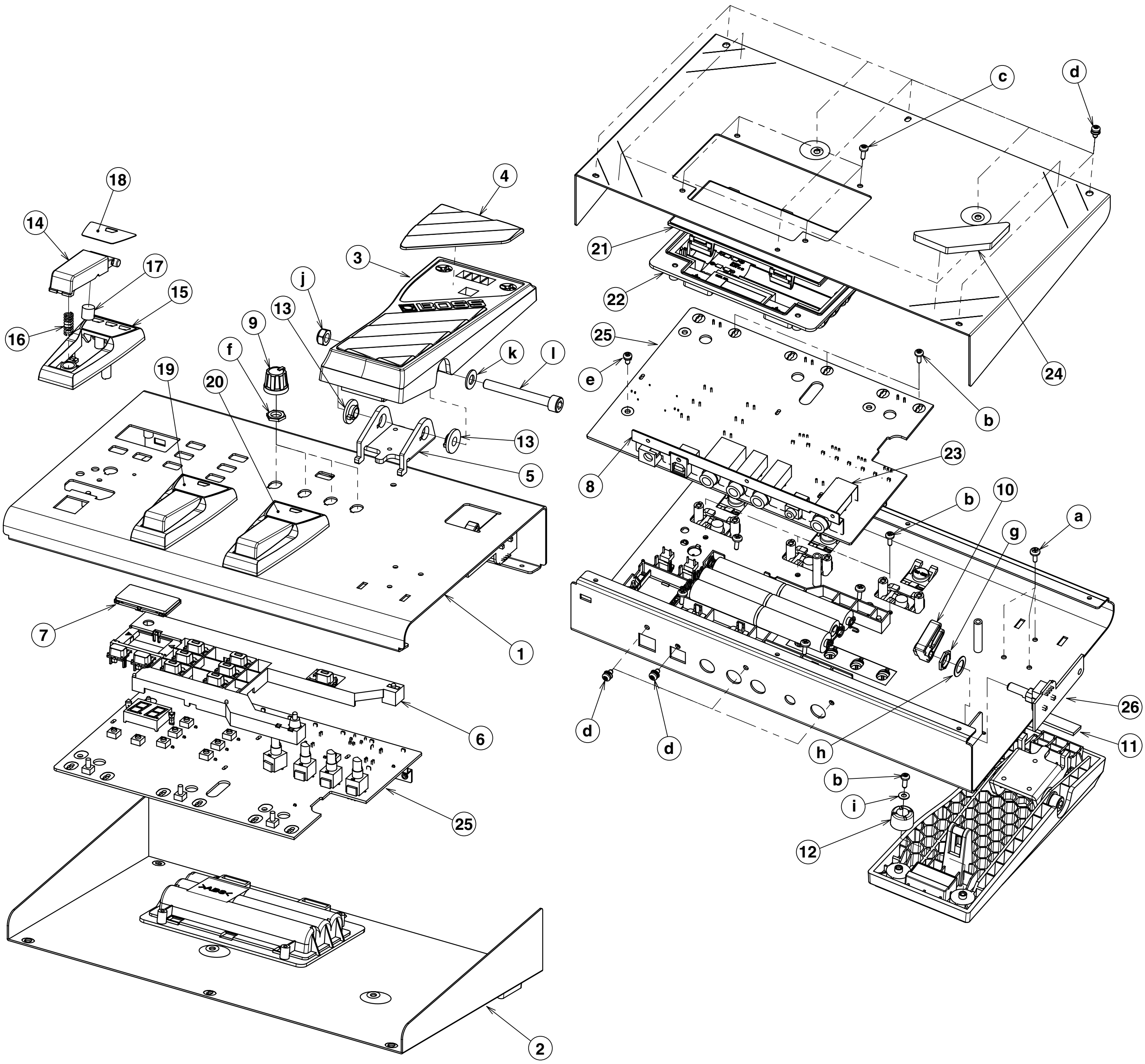
Location of Controls





No.	Part Code	Part Name	Description	Q'ty	
1	**until B**1349**				
	5100012842	7 SEG COVER PRINT		1	
	5100001581	LED	A-552SR-A B/W (F5029412R0)	1	7-segment LED
	05015956	LED	L-7104SRT (F5229820R0)	2	lamp type
1	**from B**1350**				
	5100002398	7 SEG COVER	(G2567172R0)	1	
	5100001581	LED	A-552SR-A B/W (F5029412R0)	1	7-segment LED
	5100006346	LED	KP-1608SURC	2	tip type
2	5100011390	TOP COVER		1	
3	03344934	R-KNOB	(G2477122/75D522N0R0)	3	
	5100001448	POTENTIOMETER (F3279802R0)	RD901F-40-125F-B50K-00D	3	
4	04788078	LED	KP-1608PBC-A	1	
5	5100006346	LED	KP-1608SURC	6	
6	5100011395	PEDAL PLATE		1	
7	5100011392	VR PEDAL		1	
8	5100011403	PEDAL LABEL	SOLO	1	
9	5100011402	PEDAL LABEL	MEMORY UP	1	
10	5100011401	PEDAL LABEL	MEMORY DOWN	1	
11	5100002400	SW PEDAL ESCUTCHEON	(G2497024R0)	3	
12	5100001928	SW PEDAL	(G2187916R0)	3	
	03344723	TACT SWITCH	SKQKAKD010	3	
13	5100011393	KEY UNIT		1	
	01780101	TACT SWITCH	SKQKABD010	9	
14	03568167	6.5MM JACK	HTJ-064-11D	1	
15	03012689	3.5MM JACK	HTJ-035-23DBS	1	
16	5100003941	6.5MM JACK	HTJ-064-11I (F3449118R0)	2	
17	04909467	6.5MM JACK(PHONES)	HTJ-064-05A	1	
18	02781101	USB CONNECTOR B TYPE FEMALE	YKF45-0020N	1	
19	04908701	ADAPTOR JACK	KM02018ABM1P	1	
20	5100011391	BOTTOM COVER		1	
21	03344934	R-KNOB	(G2477122/75D522N0R0)	1	
	5100001452	POTENTIOMETER (F3229205R0)	RD901F-40-125F-B50K-0BD	1	
a	40342956	SCREW M3X6	PAN MACHINE W/SW+PW(S) BZC	4	

Exploded View



Exploded View Parts List

No.	Part Code	Part Name	Description	Q'ty
1	5100011390	TOP COVER		1
2	5100011391	BOTTOM COVER		1
3	5100011392	VR PEDAL		1
4	5100011395	PEDAL PLATE		1
5	5100011394	PEDAL HOLDER		1
6	5100011393	KEY UNIT		1
7	5100012842	7 SEG COVER PRINT	until B**1349	1
	5100002398	7 SEG COVER	from B**1350	1
8	5100011396	JACK HOLDER		1
9	03344934	R-KNOB	(G2477122/75D522N0R0)	4
10	03561356	SHAFT STAY	STAY	1
11	04560601	CUSHION	R (G2357111)	1
12	5100012831	REAR CUSHION		2
13	04560634	BOLT HOLDER	(G2147874)	2
14	5100001928	SW PEDAL	(G2187916R0)	3
15	5100002400	SW PEDAL ESCUTCHEON	(G2497024R0)	3
16	04560712	SUPPORT SPRING	(G2177103R0)	3
17	5100011841	SW PEDAL FOOT	H=7.2 (G2357140R0)	3
18	5100011401	PEDAL LABEL	MEMORY DOWN	1
19	5100011402	PEDAL LABEL	MEMORY UP	1
20	5100011403	PEDAL LABEL	SOLO	1
21	04560878	BATTERY COVER	RTC #G2027602R0	1
22	73455190	BATTERY CASE SET		1
23	04783901	JACK COVER	(G2257203R0)	1
24	03344923	FOOT H=5 (G2357120)		4
	5100009941	MAIN SHEET ASSY		
	* *This unit includes the following parts.*			
25	********	MAIN BOARD ASSY		1
26	********	EXP BOARD ASSY		1
a	40019123	SCREW 3X8	BINDING TAPTITE S BZC	3
b	40011278	SCREW 3X8	BINDING TAPTITE P FE ZC	8
c	40011312	SCREW 3X8	BINDING TAPTITE P FE BZC	4
d	40342956	SCREW M3X6	001303 ACHINE W/SW+PW(S) BZC	12
e	40013056	SCREW M3X6	PAN MACHINE W/SW+PW(S) ZC	1
f	40128923	HEX NUT M7		4
g	5100003918	JACK NUT M9X12X2	NI RTC(H5039510R0)	1
h	5100003926	PLAIN WASHER 9X13.5X0.5T	NI(H5039158R0)	1
i	40127023	WASHER M3X8X0.5	FEBC	2
j	04560590	U-NUT M6	BZC	1
k	04560589	WASHER	M6 T1 (H5039122)	1
l	5100012929	HEX BOLT M6X50	HALF THREAD BZC	1

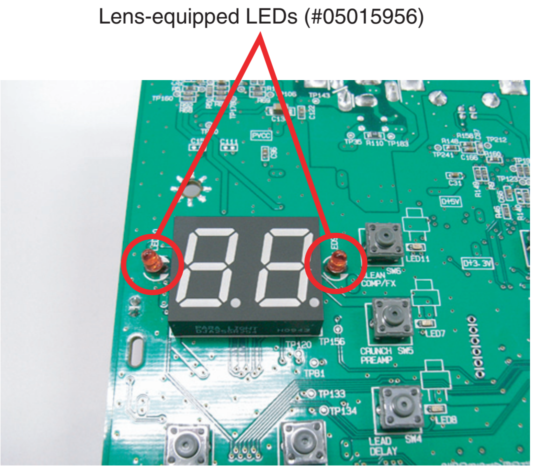
Important Notes When Replacing Parts

The specifications of each of the parts described below have changed as of production number **B**1350**. Pre-modification parts must not be used in combination with modified parts.

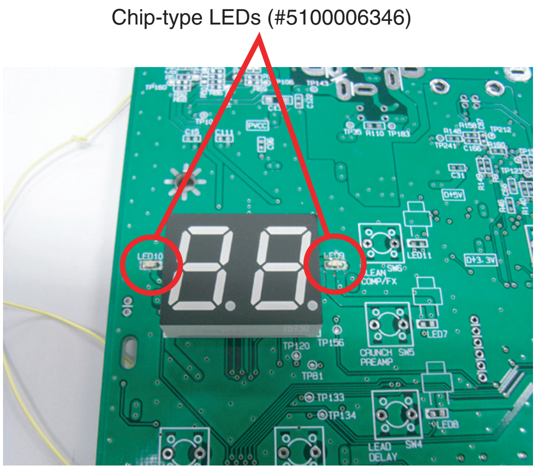
- Main Board Assy (#********)
- Key Unit (#5100011393)
- 7 Seg Cover (old: #5100012842 -> new: #5100002398)

Replacement of the Main Board Assy

The Main Board Assy is included in the Main Sheet Assy (#5100009941). The part code before and after modification is unchanged. To distinguish new and old items, check the revision number on the circuit board, or refer to the photos below.
Note that only the modified Main Board Assy is supplied for service use. Accordingly, when replacing a pre-modification Main Board Assy, also replace the Key Unit and 7 Seg Cover with the modified items at the same time.



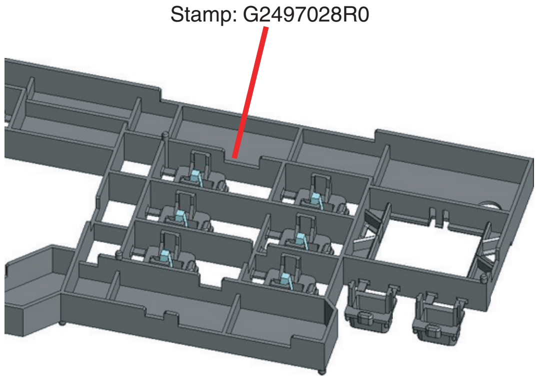
Pre-modification Main Board Assy



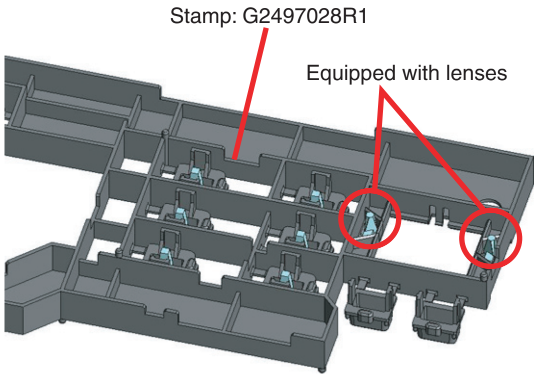
Modified Main Board Assy

Replacement of the Key Unit

For the Key Unit as well, the part code before and after modification is unchanged (#5100011393). To distinguish the new and old items, refer to the following figures.
Note that only the modified Key Unit is supplied for service use. Accordingly, when replacing a pre-modification key unit, also replace the Main Board Assy and 7 Seg Cover with the modified items at the same time.



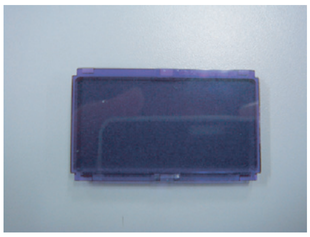
Pre-modification Key Unit



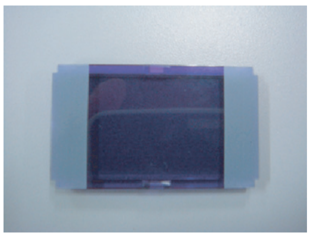
Modified key unit

Replacement of the 7 Seg Cover

The part code for the 7 Seg Cover before and after modification is unchanged. To distinguish the new and old items, refer to the following photos.
Note that both the pre-modification and 7 Seg Cover and the modified 7 Seg Cover are supplied for service use.



Pre-modification 7 Seg Cover



Modified 7 Seg Cover

Parts List

Safety Precautions:
The parts marked ⚠ have safety-related characteristics. Use only listed parts for replacement.

Due to one or more of the following reasons,
parts with parts code ******** cannot be supplied as service parts.

- Part supplied only as a component in a complete assembly
- Copyright does not permit the part to be supplied
- Part is sold commercially

Note: The parts marked # are new. (initial parts) The description "Q'ty" means a necessary number of the parts per one product.

CASING

#	5100011390	TOP COVER			1
#	5100011391	BOTTOM COVER			1
	04560878	BATTERY COVER	RTC #G2027602R0		1

CHASSIS

	03561356	SHAFT STAY	STAY		1
	73455190	BATTERY CASE SET			1
#	5100011394	PEDAL HOLDER			1
#	5100011395	PEDAL PLATE			1
#	5100011396	JACK HOLDER			1

KNOB, BUTTON

	03344934	R-KNOB	(G2477122/75D522N0R0)		4

SWITCH

	01780101	TACT SWITCH	SKQKABD010		9
	03344723	TACT SWITCH	SKQKAKD010		3

JACK, EXT TERMINAL

	02781101	USB CONNECTOR B TYPE FEMALE	YKF45-0020N		1
	03012689	3.5MM JACK	HTJ-035-23DBS		1
	03568167	6.5MM JACK	HTJ-064-11D		1
	04909467	6.5MM JACK(PHONES)	HTJ-064-05A		1
#	5100003941	6.5MM JACK	HTJ-064-11I (F3449118R0)		2
	04908701	ADAPTOR JACK	KM02018ABM1P		1

PWB ASSY

#	5100009941	MAIN SHEET ASSY			1
	* *This unit includes the following parts.*				
#	********	MAIN BOARD ASSY			1
#	********	EXP BOARD ASSY			1

DIODE

	04788078	LED	KP-1608PBC-A		1
	5100006346	LED	KP-1608SURC		6
#	5100001581	LED	A-552SR-A B/W (F5029412R0)	7-segment LED	1
	05015956	LED	L-7104SRT (F5229820R0)	lamp type (until B**1349)	2
	5100006346	LED	KP-1608SURC	tip type (from B**1350)	2

POTENTIOMETER

	01016167	11M/M ROTARY POTENTIOMETER	RK11K1140AFG 10KX1	on Exp Board	1
	5100001448	POTENTIOMETER (F3279802R0)	RD901F-40-125F-B50K-00D		3
	5100001452	POTENTIOMETER (F3229205R0)	RD901F-40-125F-B50K-0BD		1

WIRING, CABLE

#	5100011956	WIRING 3P			1

SCREWS

	40013056	SCREW M3X6	PAN MACHINE W/SW+PW(S) ZC		1
	40342956	SCREW M3X6	PAN MACHINE W/SW+PW(S) BZC		12
	40011278	SCREW 3X8	BINDING TAPTITE P FE ZC		8
	40011312	SCREW 3X8	BINDING TAPTITE P FE BZC		4
	40019123	SCREW 3X8	BINDING TAPTITE S BZC		3
#	5100012929	HEX BOLT M6X50	HALF THREAD BZC		1
	40128923	HEX NUT M7			4
	04560590	U-NUT M6	BZC		1
	5100003918	JACK NUT M9X12X2	NI RTC(H5039510R0)		1
	04560589	WASHER	M6 T1 (H5039122)		1
	40127023	WASHER M3X8X0.5	FEBC		2
	5100003926	PLAIN WASHER 9X13.5X0.5T	NI(H5039158R0)		1
#	5100011839	SPRING WASHER M6	6.4X11.7X1.5T BZC		1

MISCELLANEOUT

	04783901	JACK COVER	(G2257203R0)		1
	03344923	FOOT H=5 (G2357120)			4
	04560601	CUSHION	R (G2357111)		1
	04560634	BOLT HOLDER	(G2147874)		1
	04560712	SUPPORT SPRING	(G2177103R0)		3
#	5100001928	SW PEDAL	(G2187916R0)		3
	5100002400	SW PEDAL ESCUTCHEON	(G2497024R0)		3
#	5100011392	VR PEDAL			1
#	5100011393	KEY UNIT			1
#	5100011401	PEDAL LABEL	MEMORY DOWN		1
#	5100011402	PEDAL LABEL	MEMORY UP		1
#	5100011403	PEDAL LABEL	SOLO		1
#	5100011841	SW PEDAL FOOT	H=7.2 (G2357140R0)		3
#	5100012831	REAR CUSHION			2
#	5100012842	7 SEG COVER PRINT		(until B**1349)	1
	5100002398	7 SEG COVER	(G2567172R0)	(from B**1350)	1

ACCESSORIES (Standard)

#	5100011935	OWNER’S MANUAL	JAPANESE		1
#	5100011936	OWNER’S MANUAL	ENGLISH		1

Verifying the Version Number

1. Connect an AC adaptor (PSA series).
2. Turn down all controls all the way counterclockwise (minimum).
3. Hold down [WRITE] and [EXTREME] and insert a plug into the **INPUT** jack.
   The power comes on, and after a dot is displayed for approximately two seconds, the version is displayed on the 7-segment LED display.
4. Press [EXIT] to transfer to the Test Mode.

Data Backup and Restore Operations

Follow the steps described below to save patch and sound library data. Pedal-calibration settings cannot be saved.

Items Required

- Computer (running Windows XP)
- USB cable
- MIDI sequencer program (SONAR series or the like)
- USB driver for the ME-25 (obtainable from http://www.roland.co.jp)

Sending Data to the Computer

1. Use the USB cable to connect the ME-25 to the computer installed with the USB driver for the ME-25.
2. Turn down all controls all the way counterclockwise (minimum).
3. Hold down [EXIT], [LEAD], and [EXTREME] and insert the plug into the **INPUT** jack.
   The message **dU.** appears on the 7-segment LED display.
   The dot flashes while the ME-25 negotiates the connection to the computer. When the connection has been established, the dot stops flashing and stays lighted and the [CLEAN] LED lights up.
4. Start the MIDI sequencer program on the computer and put the system in standby for receiving SysEx data.
5. Press [WRITE].
   Data transmission starts. During sending, the triangular LEDs to the left and right of the 7-segment LED display flash.
6. When the triangular LEDs go dark, the SysEx data is saved in a file.

Receiving Data from the Computer

1. Use the USB cable to connect the ME-25 to the computer installed with the USB driver for the ME-25.
2. Start the ME-25 is the normal performance mode.
3. Play the MIDI sequencer program on the computer to send the backed-up SysEx data.
   When playback ends, the restore operation is complete.

* *No operation is required on the ME-25.*

Performing a Factory Reset

NOTE

A Factory Reset in the User Mode (Owner's Manual p. 12) must not be executed on a user's ME-25 in your care. When executing the Factory Reset, be sure to follow the procedure described below. The ME-25 records the factory-reset history. Executing this in the User Mode overwrites the record left by the user.

1. Adjust all knobs to their minimum settings.
2. Hold down [WRITE], [CLEAN], and [EXTREME] and insert the plug into the **INPUT** jack.
3. When **--** appears on the 7-segment LED display, press [EXIT] 16 times.
   The message **FA** appears on the 7-segment LED display.
4. Press [WRITE].
   The message **FA** and dots appear on the 7-segment LED display.
   Left dot: This indicates that a Factory Reset was executed when the unit was shipped from the factory.
   Right dot: This indicates that a Factory Reset has been executed by the user one or more times.

   * *This history cannot be reset.*

   Continue with execution of the Factory Reset. Follow the procedure shown below. To quit without executing the procedure, detach the plug from the **INPUT** jack to switch off the power.

5. Press [WRITE].
   The triangular LEDs to the left and right of the 7-segment LED display flash.
6. Press [WRITE] a second time.
   A Factory Reset is executed.
   The display of 7-segment LED changes lighting to flashing. Keep the power from being switched off while the LEDs are flashing.

   When the Factory Reset is finished, the message **Fn** appears on the 7-segment LED display.
7. Detach the plug from the **INPUT** jack.
   The power is switched off.

Updating the System

You use a computer-based MIDI sequencer or the like to play back update-use MIDI data, and carry out a system update on the ME-25 by receiving the sent MIDI data.

NOTE

Performing a system update causes any patch data in the unit to be lost. Back up any necessary data in advance as described in **Data Backup and Restore Operations** (p. 11).

Items Required

- Computer (running Windows XP)
- USB cable
- Update-use MIDI data
- USB driver for the ME-25 (obtainable from http://www.roland.co.jp)
- UpdSMF (obtained via Service Net)

Procedure

1. Use the USB cable to connect the ME-25 to the computer installed with the USB driver for the ME-25.

2. Turn down all controls all the way counterclockwise (minimum).

3. Hold down [WRITE], [EXTREME], and [SUPER STACK] and insert the plug into the **INPUT** jack.
The message **UP.** appears on the 7-segment LED display.



The dot flashes while the ME-25 negotiates the connection to the computer. When the connection has been established, the dot stops flashing and stays lighted.

* *If the dot on the 7-segment LED display does not light up steadily, the connection has a problem. Verify that the driver is correctly installed and set up and that the USB cable is correctly connected.*

4. On the computer, start the program for sending MIDI data (UpdSMF) and send the update-use MIDI data.
During data receiving, the triangular LEDs to the left and right of the 7-segment LED display flash with different timing.
The update takes about 3 minutes.
When the update has ended, the message **Fn.** appears on the 7-segment LED display.

Test Mode

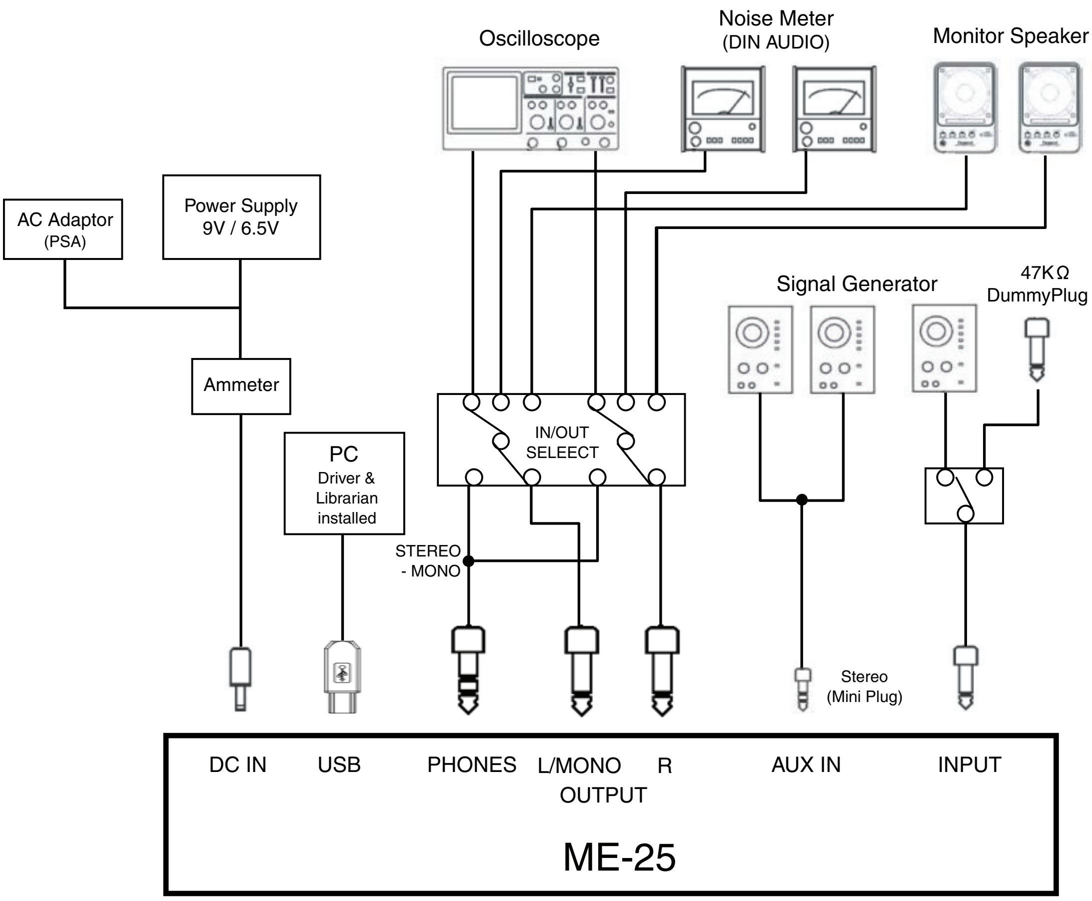
Items Required

- Noise meter x 2
- Oscilloscope x 1
- Stabilized DC power supply x 1
- Oscillator x 2
- Powered monitor x 2
- 47kΩ short plug (standard monaural) x 1
- Tester x 1
- Cables for connecting the items just described
- Tool for switching the input to the INPUT jack (e.g., J-5 or the like)
- AA batteries x 6
- Computer (running Windows XP)
- USB driver for the ME-25 (obtainable from http://www.roland.co.jp)

* *Install the USB driver into the computer in advance.*

Entering the Test Mode

1. Refer to the figure below and connect the measuring equipment to connectors other than the **INPUT** jack.



2. Turn down all controls all the way counterclockwise (minimum).

* *The Test Mode does not start unless all controls have been turned all the way counterclockwise.*

3. Hold down [WRITE] and [EXTREME] and insert a plug into the **INPUT** jack.

* *Holding down [WRITE] and [CRUNCH] by mistake and inserting the plug enters the Test Mode for factory-default inspection. In many cases, execution proceeds unchanged for some time without this being noticed, but continuing in the Test Mode for factory-default inspection is impossible without special tools.*

The power comes on, and after a dot is displayed for approximately two seconds, the version is displayed on the 7-segment LED display.

Quitting the Test Mode

Detach the plug from the **INPUT** jack, switch off the power.

Skipping

1. Press and hold down [CRUNCH] and [SUPER].
   This quits the test item currently being executed.
2. Press [EXIT] or [LEAD] to select the test item.
3. Press [WRITE] to execute the test item.

Test Items

1. Version Check and Device Check

1. Turn down all controls all the way counterclockwise (minimum).
2. Hold down [WRITE] and [EXTREME] and insert a plug into the **INPUT** jack.
   The power comes on, and after a dot is displayed for approximately two seconds, the version is displayed on the 7-segment LED display.



Checking of the internal devices is conducted until the triangular LEDs to the left and right of the 7-segment LED display lights up.



3. Press [EXIT] to move to the next test.

2. Current-consumption Check, Voltage detection Check, and SW (Switch) and LED Check

1. Make sure that all LEDs light up.
2. Measure the current consumption and verify that it is between **110** and **130 mA**.

* ***The voltage-detection check*** *(steps* ***3*** *through* ***6*** *below) requires a stabilized power supply. If none is available, skip steps* ***3*** *through* ***6****.*

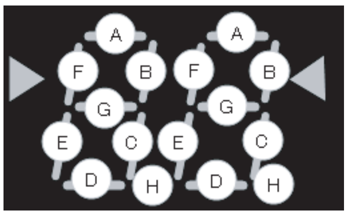
3. Set the voltage of the stabilized power supply to **6.5 V**.
4. Verify that **bt** is displayed on the 7-segment LED display.



5. Set the voltage of the stabilized power supply to **9.0 V**.
6. Verify that the reading on the 7-segment LED display changes from **bt** to a fully illuminated state.
7. Press the switches shown in the following chart in the sequence shown under No.
   When you press each switch, verify that the corresponding LED in the chart goes dark.
   Verify that a clicking sensation is felt when each switch is pressed.

No.	Switch	LED
1	WRITE	7-segment LED - A
2	WRITE	7-segment LED - B
3	WRITE	7-segment LED - C
4	WRITE	7-segment LED - D
5	EXIT	7-segment LED - E
6	EXIT	7-segment LED - F
7	EXIT	7-segment LED - G
8	EXIT	7-segment LED - H
9	LEAD	LEAD
10	DRIVE	DRIVE
11	CLEAN	CLEAN
12	CRUNCH	CRUNCH
13	HEAVY	HEAVY
14	EXTREME	EXTREME
15	SUPER STACK	SUPER STACK
16	SUPER STACK	PEDAL FX
17	SOLO/TAP TEMPO	SOLO/TAP TEMPO
18	MEMORY ▲	◀
19	MEMORY ▼	▶

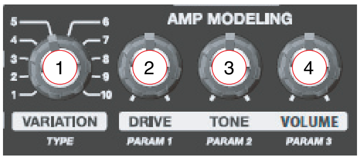
7-segment LED darkening sequence

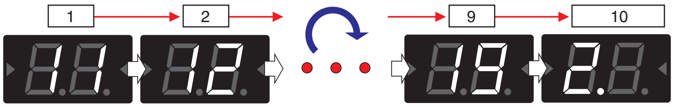


8. After all have gone dark, press [MEMORY ▼] to move to the next test.

3. VR Check

Operate the knobs shown in the following chart in the sequence shown under No. and verify the reading of the 7-segment LED display.

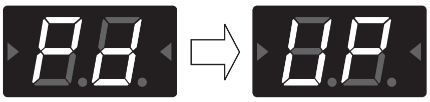


No.	knob	knob position and reading on the 7-segment LED display
1	VARIATION	 Verify that the 7-segment LED display changes with each click.
2	DRIVE	
3	TONE	
4	VOLUME	

When all of four knobs have been checked, test program advances to the next item automatically.

4. EXP (Expression Pedal) VR Check and Calibration

1. The 7-segment LED display shows **Pd**, then **UP** appears.



2. Depress the heel side of the expression pedal all the way and press [WRITE].
The message **dn** appears on the 7-segment LED display.



3. Depress the toe side of the expression pedal all the way and press [WRITE].
The message **5** appears on the 7-segment LED display.

* *This **5** is the sensitivity of the expression-pedal switch. It is set to **5** by default.*

4. Depress the toe side of the expression pedal more forcefully and verify that the **PEDAL FX** LED lights up.

5. Again depress the toe side of the expression pedal forcefully and verify that the **PEDAL FX** LED goes dark.

6. Press [EXIT] to move to the next test.

The Reading Shown on the 7-segment LED Display

When **UP** is shown, dots are also displayed at the same time.

Left dot: This indicates that calibration was executed when the unit was shipped from the factory.

Right dot: This indicates that calibration has been executed one or more times by the user or a service technician since the unit was shipped from the factory.

* *This calibration record cannot be reset.*

The ME-25 records the expression-pedal calibration history. Executing this in the User Mode (Owner's Manual p. 12) overwrites the calibration record left by the user.
If the pedal operates in an unexpected way, examining the calibration history may allow determination of a problem in the factory-default calibration or in calibration performed by the user.

5. D/A Check

1. Insert plugs into the **OUTPUT L/MONO**, **R** and **PHONES** jacks.

* *Correct waveforms are not displayed unless all connections are made to the* ***OUTPUT L/MONO***, ***R*** *and* ***PHONES*** *jacks. Be sure shielded cords or jack adapter plugs are inserted.*

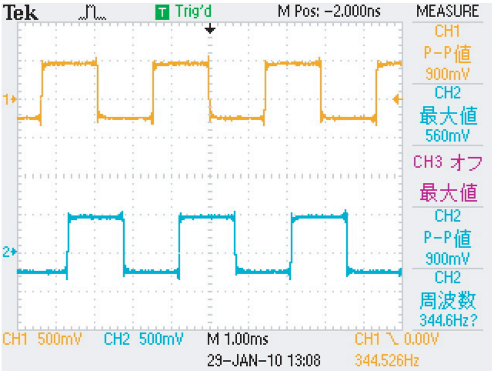
2. On the oscilloscope, set **Channel 1 to 0.5 V/div**, **Channel 2 to 0.5 V/div**, and **Time to 1.0 ms/div**.

3. Input the **PHONES** output to the oscilloscope.

4. Verify that **dA** appears on the 7-segment LED display and that both the triangular LEDs to the left and right of the 7-segment LED display light up.



5. Verify that the **PHONES** output value is between **850** and **930 mVp-p**.

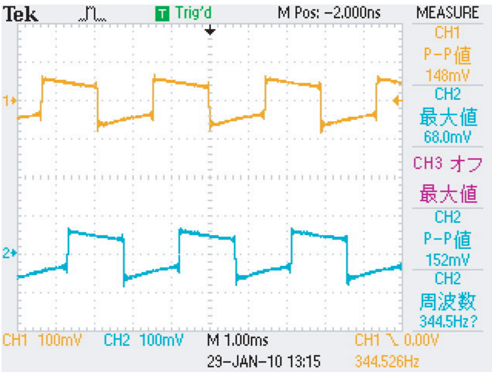


6. Press [EXIT] and verify that the triangular LEDs to the left and right of the 7-segment LED display go dark.



7. On the oscilloscope, set **Channel 1 to 0.1 V/div**, **Channel 2 to 0.1 V/div**, and **Time to 1.0 ms/div**.

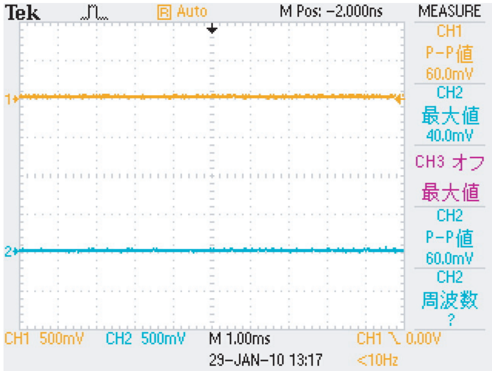
8. Verify that the output value from the **PHONES** is **180 mVp-p** or less.



9. Change the input to the oscilloscope from **PHONES** to **OUTPUT L**, **R**.

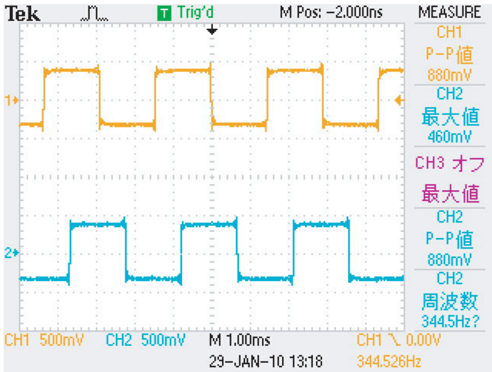
10. On the oscilloscope, set **Channel 1 to 0.5 V/div**, **Channel 2 to 0.5 V/div**, and **Time to 1.0 ms/div**.

11. Verify that nothing is output from the **OUTPUT L**, **R**.

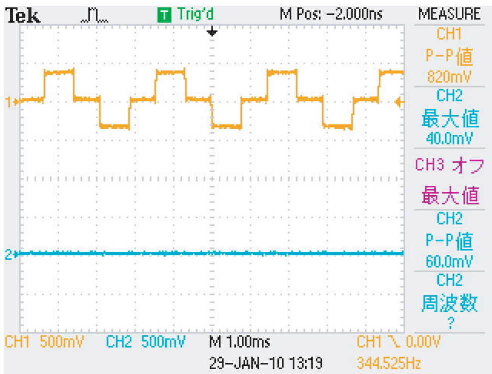


12. Press [EXIT] and verify that the triangular LEDs to the left and right of the 7-segment LED display light up again.

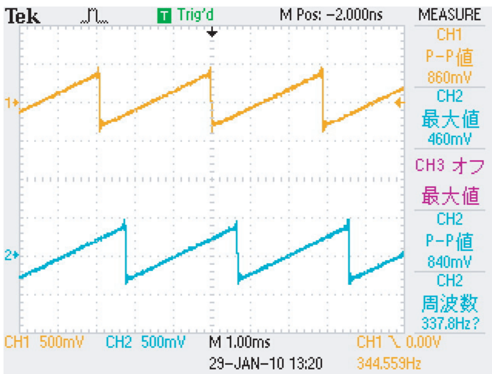
13. Verify that the **OUTPUT L**, **R** output values are between **850** and **930 mVp-p**.



14. Detach the plug from **OUTPUT R** jack.
Verify that the **OUTPUT L** waveform changes as shown below.



15. Insert the plug into **OUTPUT R** jack and detach the plug from the **PHONES** jack.
Verify that the **OUTPUT L**, **R** waveforms change as shown below.



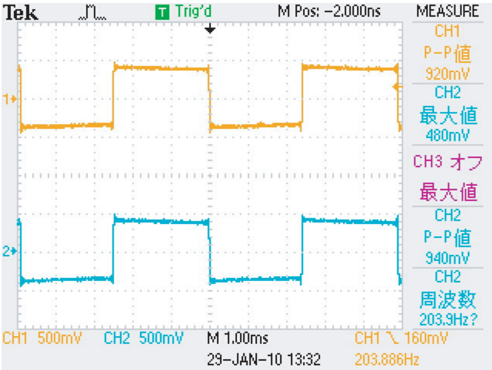
16. Press [EXIT] to move to the next test.

6. A/D Check

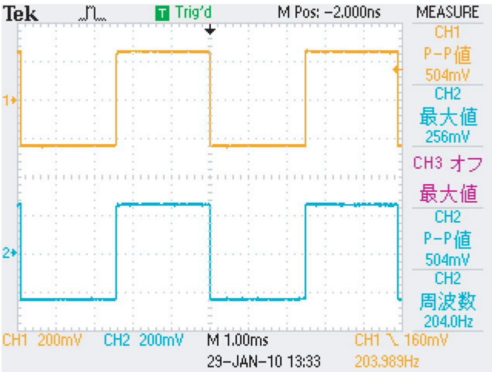
1. Verify that **Ad** is shown on the 7-segment LED display.



2. On the oscilloscope, set **Channel 1 to 0.5 V/div**, **Channel 2 to 0.5 V/div**, and **Time to 1.0 ms/div**.
3. On the oscillator, make the settings for output of **200 Hz**, **50 mVp-p**, and a **rectangular wave**, and input this to **INPUT**.
4. Verify that the **OUTPUT L**, **R** output values are between **900** and **1,000 mVp-p**.



5. Change the input to **INPUT** from the oscillator to a 47kΩ dummy resistor.
6. On the oscilloscope, set **Channel 1 to 0.2 V/div**, **Channel 2 to 0.2 V/div**, and **Time to 1.0 ms/div**.
7. On the oscillator, make the settings for output of **200 Hz**, **200 mVp-p**, and a **rectangular wave**, and input this to **AUX INPUT**.
8. Verify that the **OUTPUT L**, **R** output values are between **450** and **550 mVp-p**.



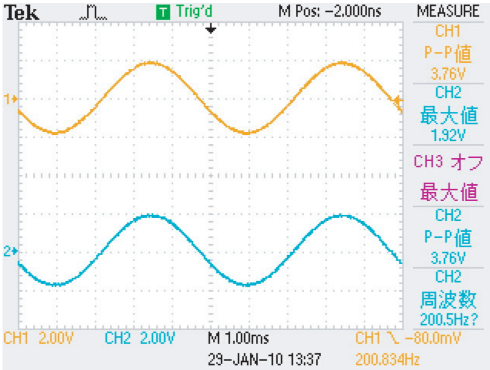
9. Detach the plug from **AUX IN** jack, connect the monitor speakers to **OUTPUT L**, **R**, and verify that no sound is heard.
10. Verify that no abnormal noise is heard even when vibration is applied.
11. Press [EXIT] to move to the next test.

7. Clip Check

1. Verify that **A.d.** is shown on the 7-segment LED display.



2. Change the input to **INPUT** from the 47kΩ dummy resistor to the oscillator.
3. On the oscilloscope, set **Channel 1 to 2.0 V/div**, **Channel 2 to 2.0 V/div**, and **Time to 1.0 ms/div**.
4. On the oscillator, make the settings for output of **200 Hz**, **4.0 Vp-p**, and a **sine wave**, and input this to **INPUT**.
5. Verify that the **OUTPUT L**, **R** waveforms are not clipped.



6. Press [EXIT] to move to the next test.

8. Residual Noise Check

1. Verify that **AF** is shown on the 7-segment LED display.



2. Change the input to **INPUT** from the oscillator to the 47kΩ dummy resistor.
3. Verify that the noise levels for **OUTPUT L**, **R** and **PHONES L**, **R** are **-88 dBu** (DIN audio) or less, or **-91 dBu** (JIS-A) or less.
4. Press [EXIT].
   The message **Fn** appears on the 7-segment LED display, and testing ends.



5. Detach the plug from **INPUT** Jack to switch off the power.

9. USB Check

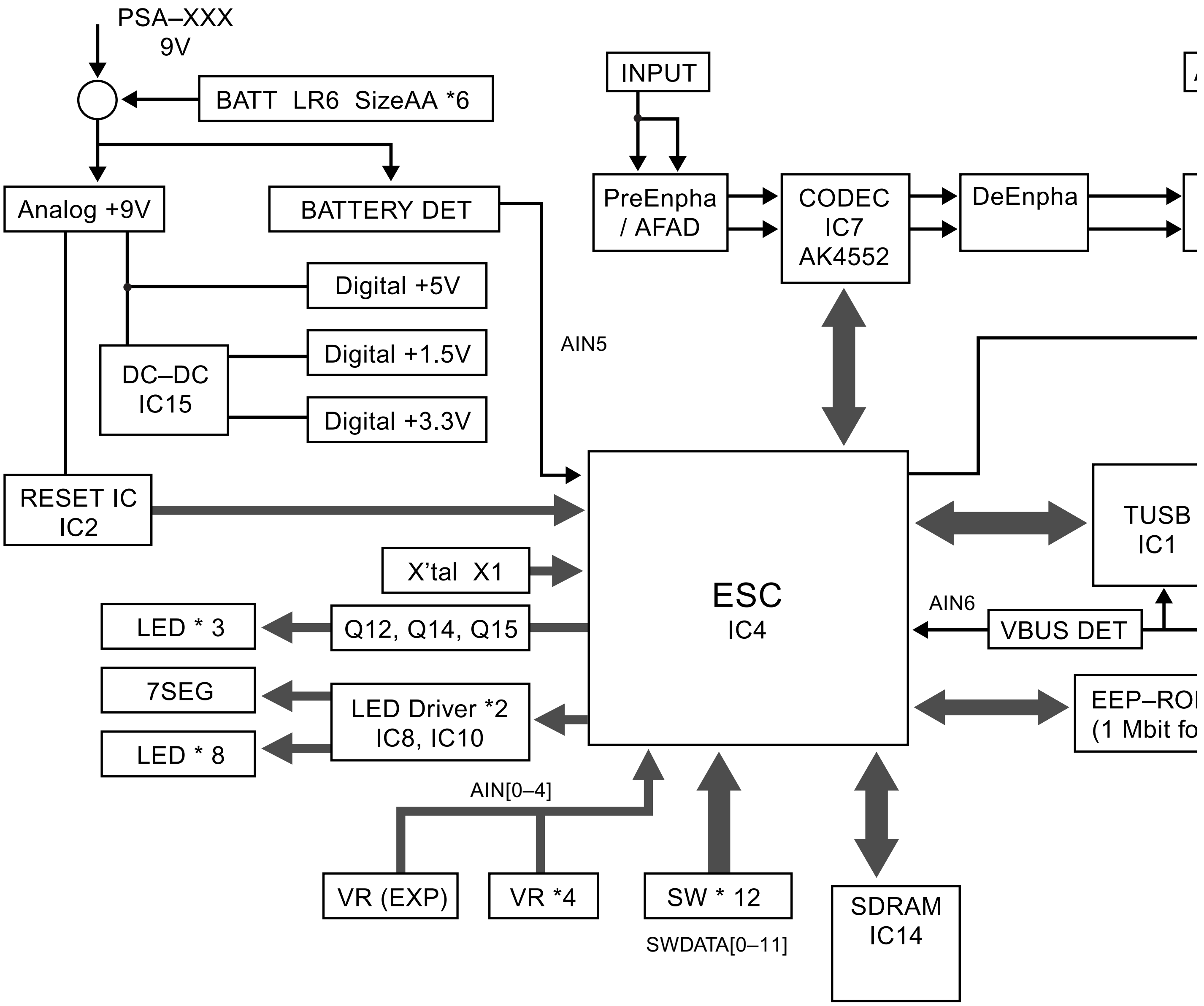
1. Connect the ME-25 and the computer using a USB cable.
2. Start the ME-25 in the normal operation mode and verify that the computer detects the ME-25.
   From the **Start** menu, select **Settings**, then **Control Panel**, then **Sounds and Audio Devices**. At the **Audio** tab, make sure the **ME-25** can be selected.

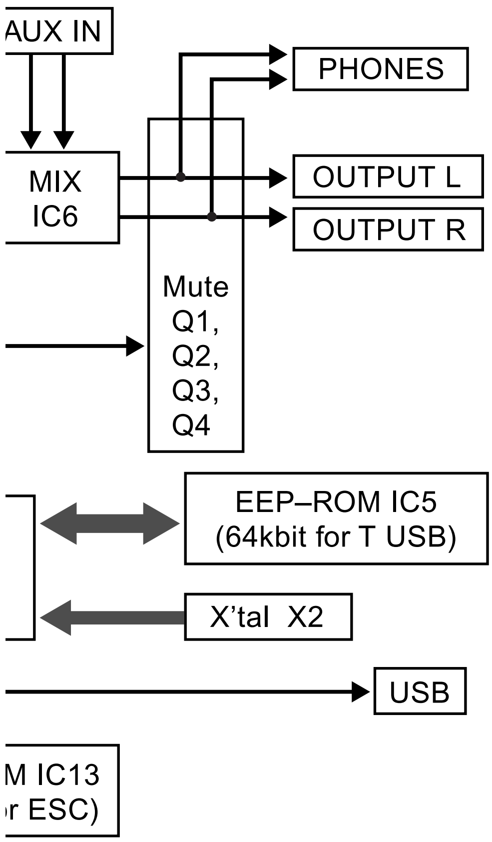
10. Battery Operation Check

1. Detach the connected AC adaptor.
2. Insert batteries into the battery compartment, then insert a plug into **INPUT** jack to switch on the power.
3. Verify that the 7-segment LED display lights up.
   If normal operation can be verified, the test results are considered to be OK (passed).

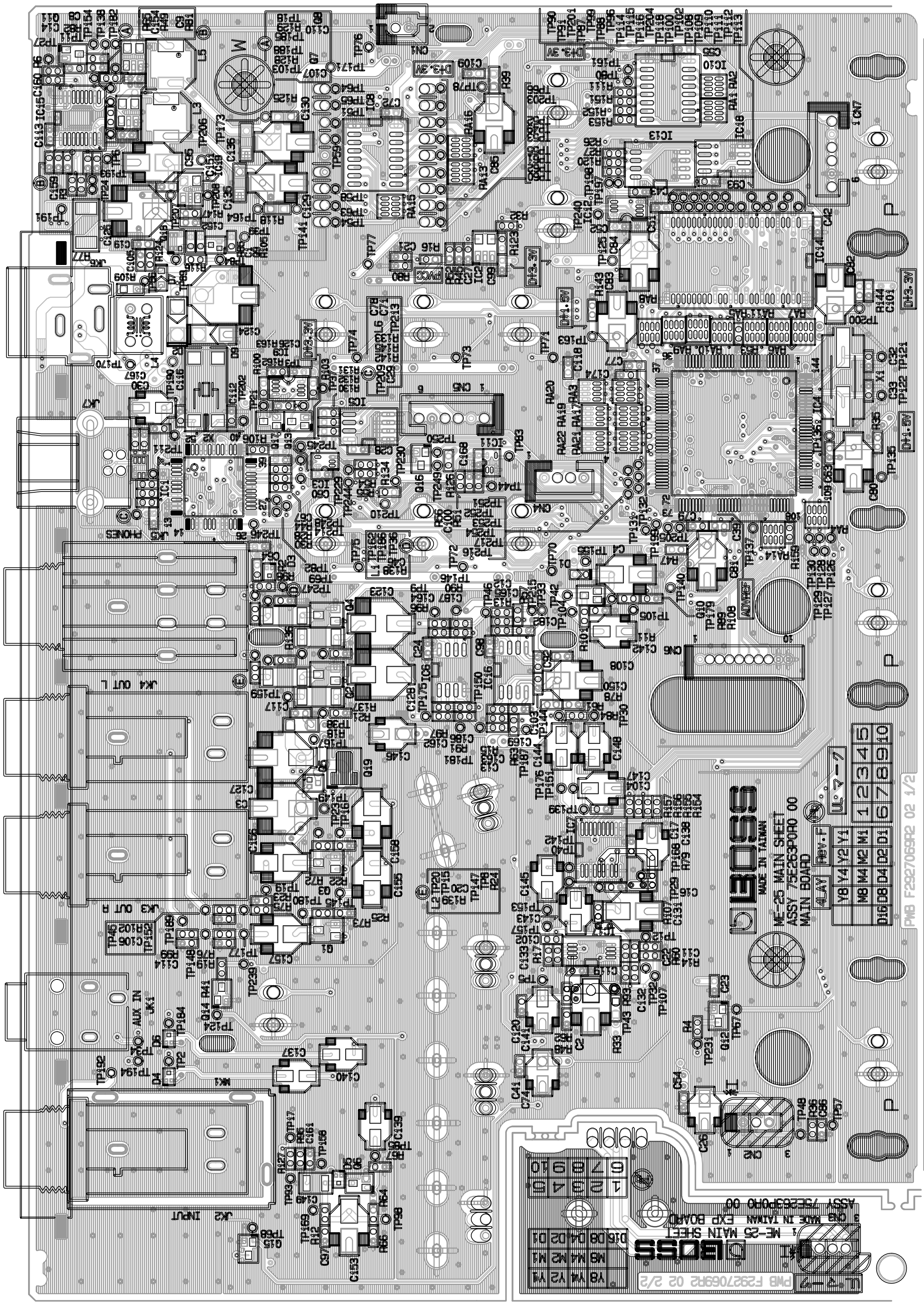
* *If the 7-segment LED display is dark, check the battery voltage.*

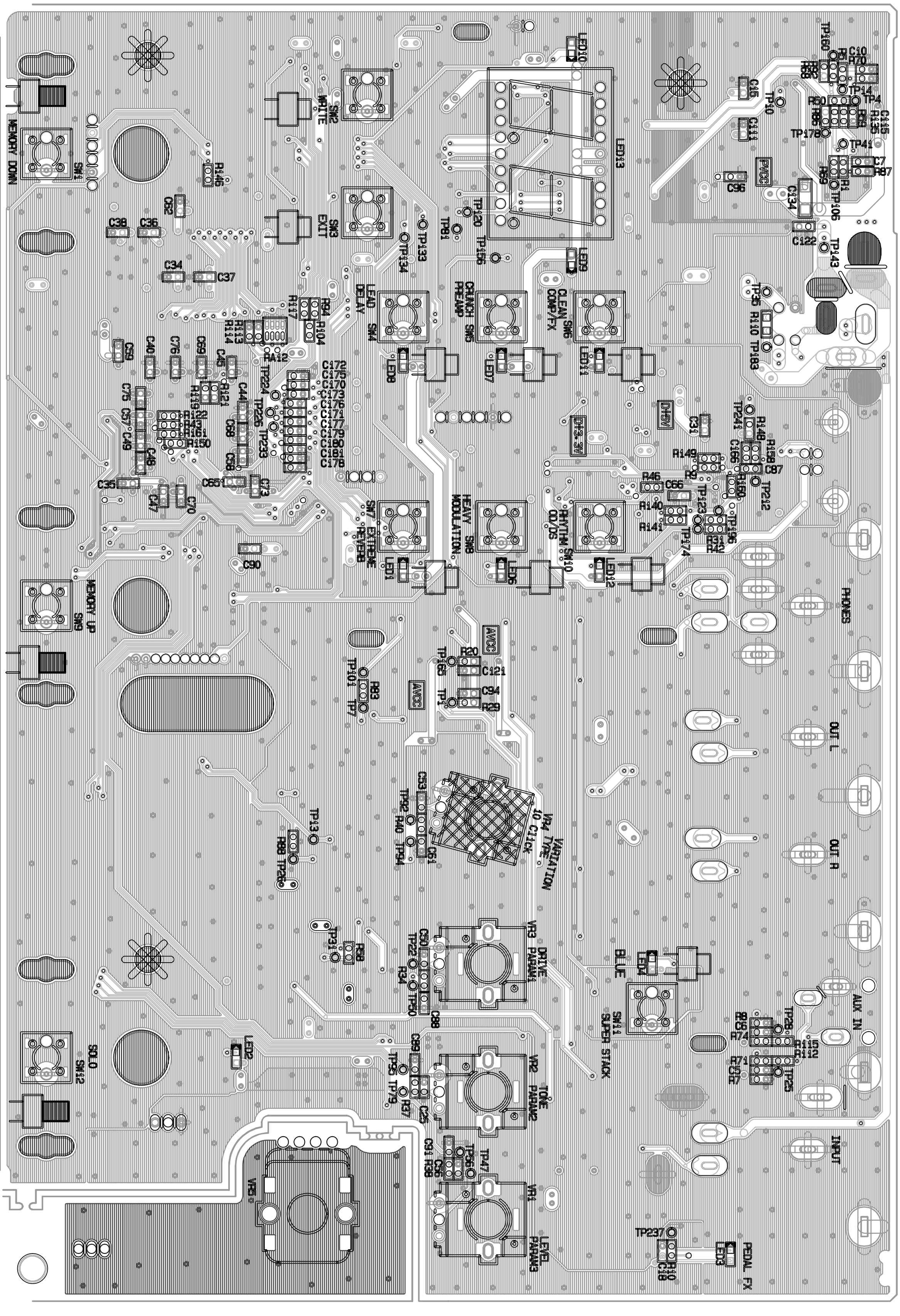
Block Diagram



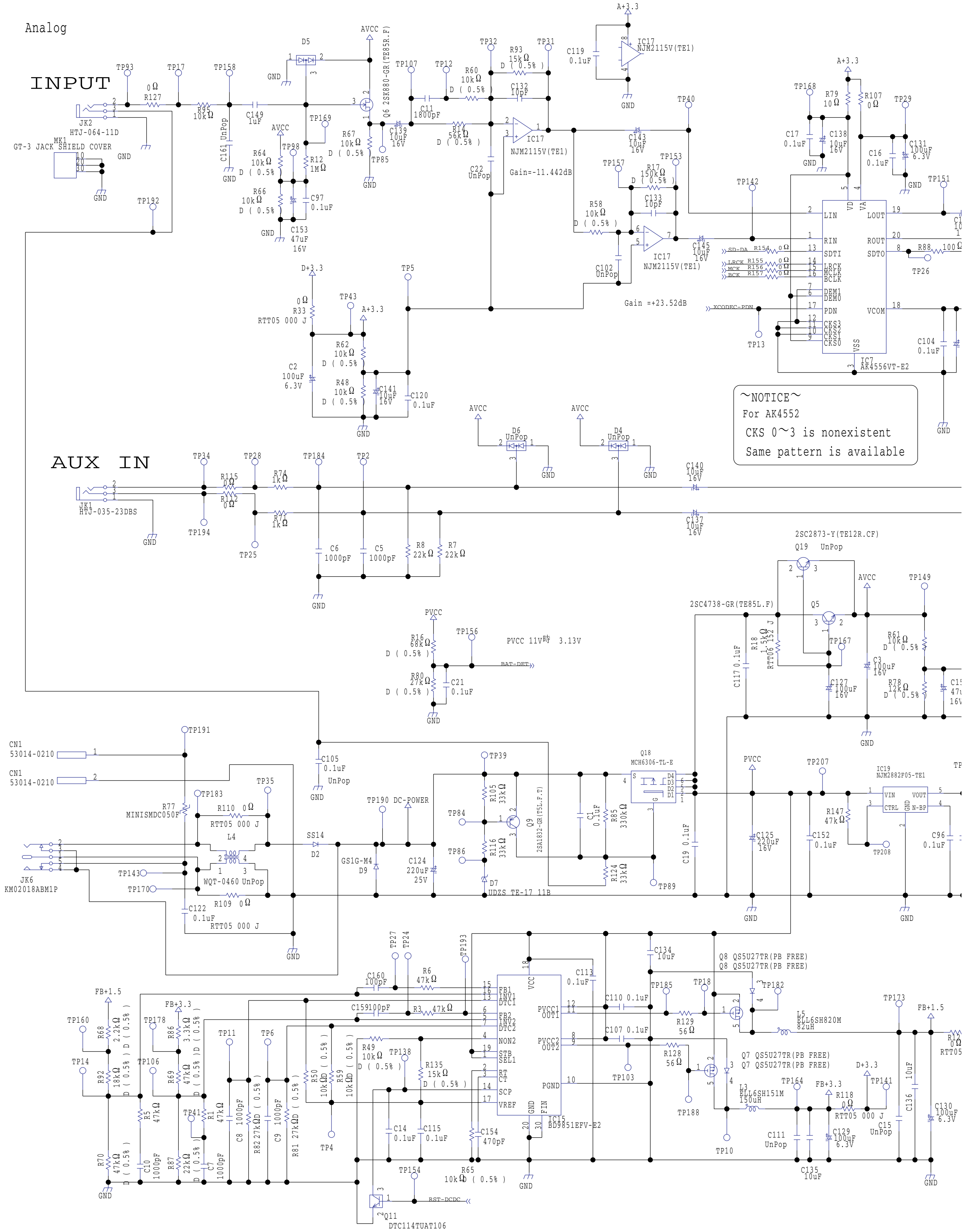

AUX IN
PHONES
MIX
IC6
OUTPUT L
OUTPUT R
Mute
Q1,
Q2,
Q3,
Q4
EEP–ROM IC5
(64kbit for T USB)
X'tal X2
USB
M IC13
r ESC)

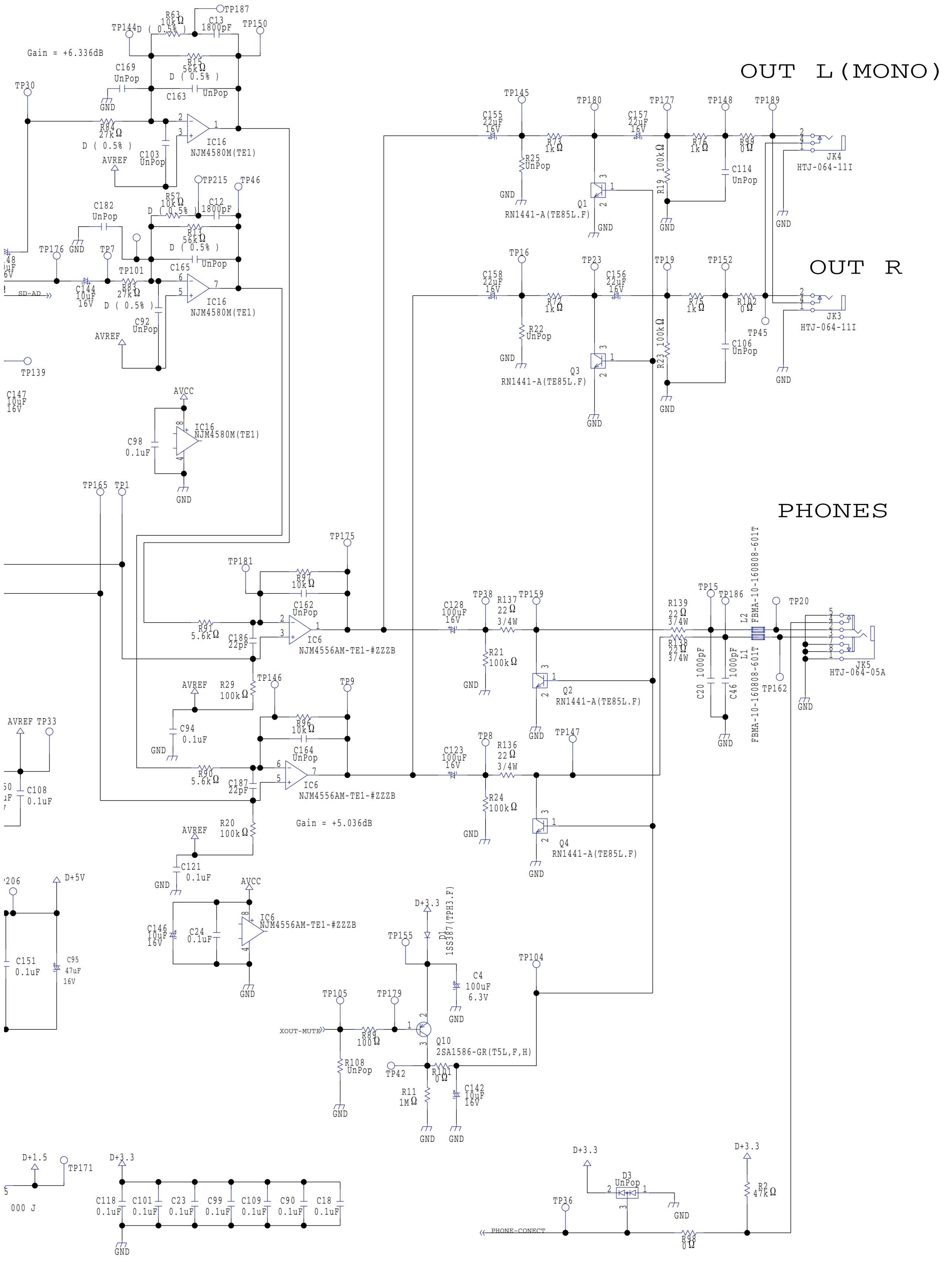
Circuit Board (Main Board)



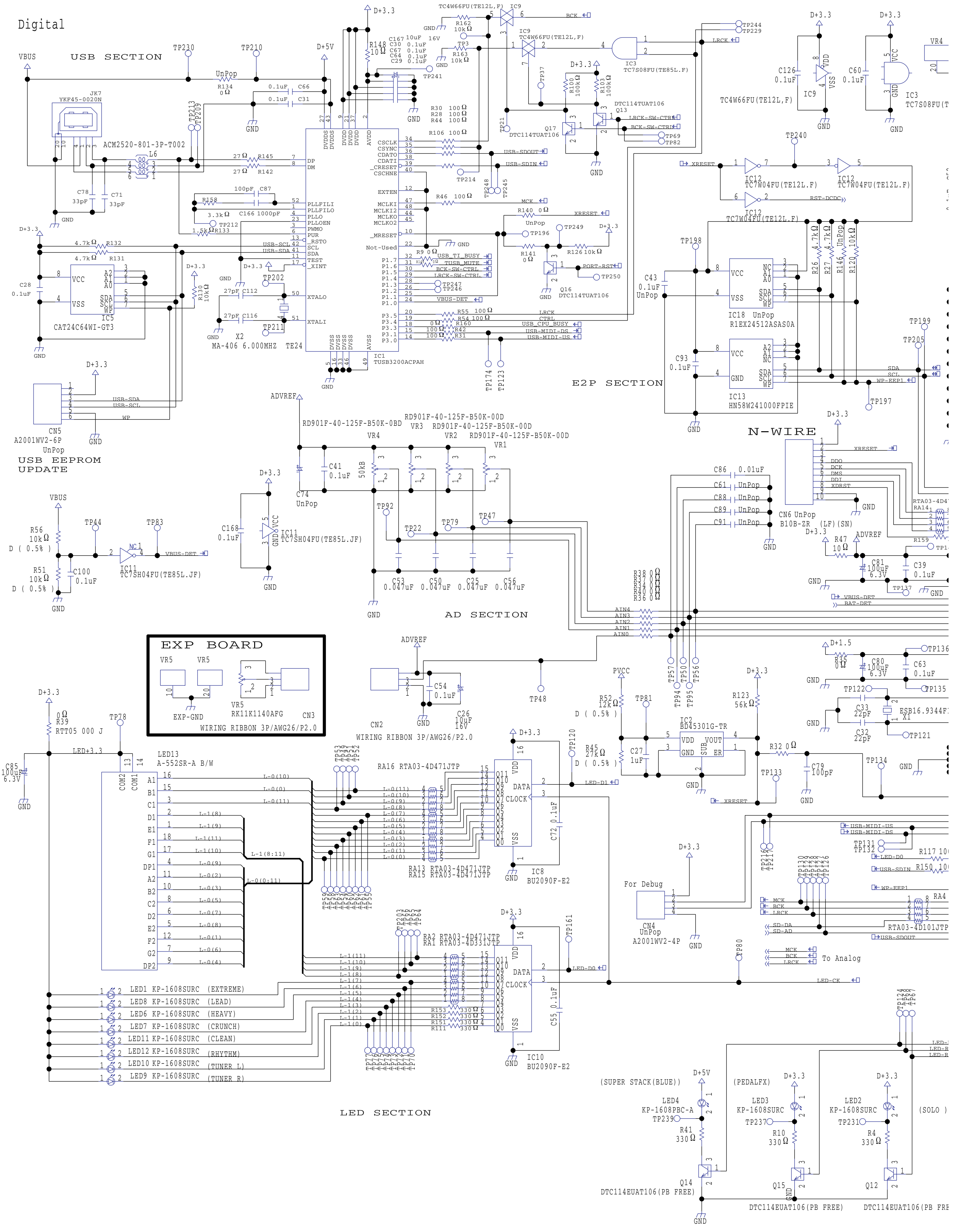

MEMORY DOWN
WRITE
EXIT
LEAD DELAY
CRUNCH PREAMP
CLEAN COMP/FX
HEAVY MODULATION
RHYTHM OD/DS
EXTREME REVERB
MEMORY UP
SOLO
PHONES
OUT L
OUT R
AUX IN
INPUT
PEDAL FX
BLUE
SUPER STACK
DRIVE PARAM1
TONE PARAM2
LEVEL PARAM3
VARIATION

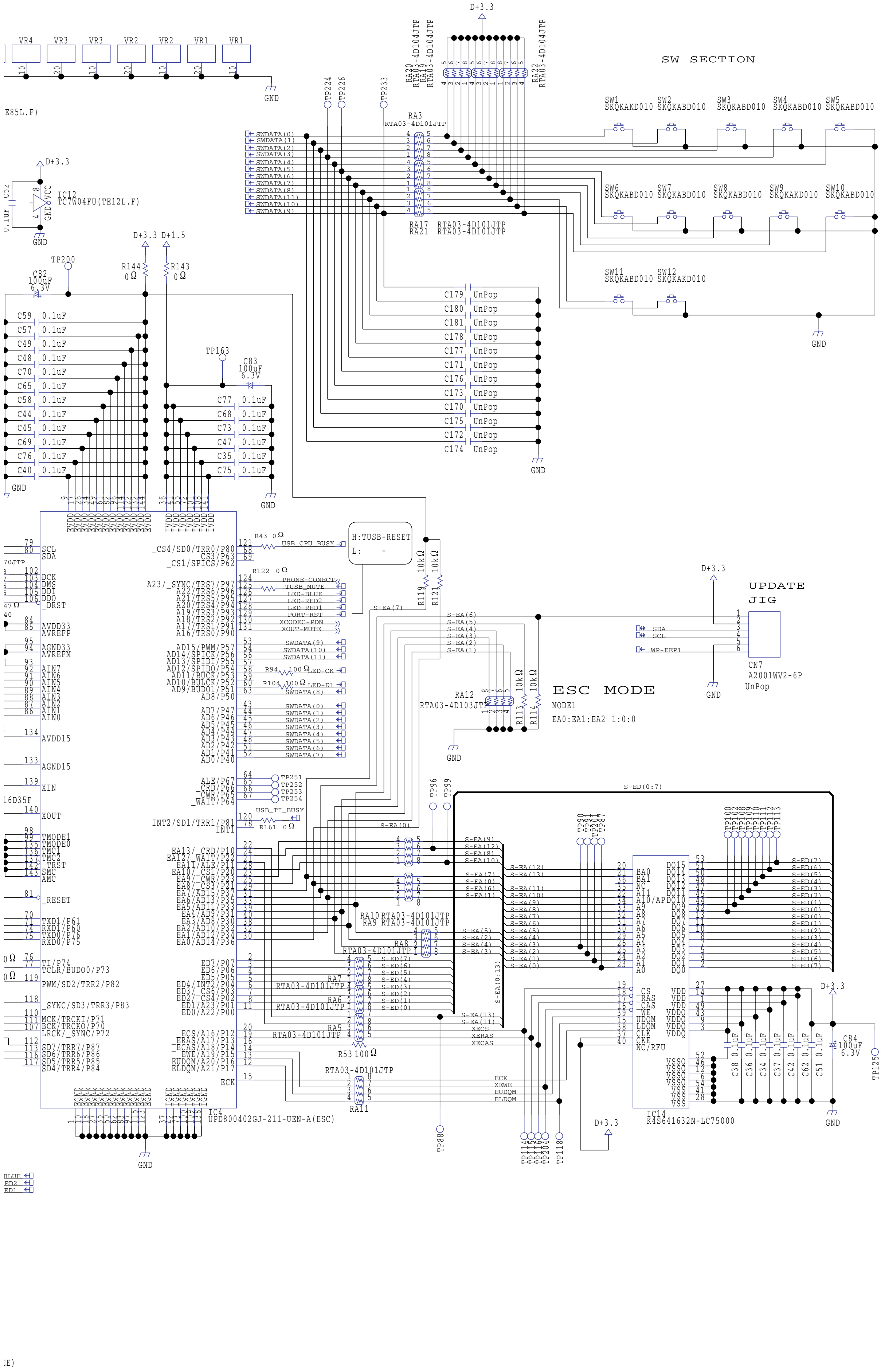
Circuit Diagram (Main Board: Analog)




OUT L(MONO)
OUT R
PHONES
Gain = +6.336dB
Gain = +5.036dB
IC16 NJM4580M(TE1)
IC6 NJM4556AM-TE1-#ZZZB
Q1 RN1441-A(TE85L.F)
Q2 RN1441-A(TE85L.F)
Q3 RN1441-A(TE85L.F)
Q4 RN1441-A(TE85L.F)
Q10 2SA1586-GR(T5L,F,H)
D1 1SS387(TPH3.F)
JK4 HTJ-064-11I
JK3 HTJ-064-11I
JK5 HTJ-064-05A
L1 FBMA-10-160808-601T
L2 FBMA-10-160808-601T
SD-AD
XOUT-MUTE
PHONE-CONECT
AVREF
AVCC
GND
D+5V
D+3.3
D+1.5

Circuit Diagram (Main Board: Digital)




SW SECTION
UPDATE JIG
CN7
A2001WV2-6P
UnPop
ESC MODE
MODE1
EA0:EA1:EA2 1:0:0
H:TUSB-RESET
L: -
IC12
TC7W04FU(TE12L.F)
IC4
UPD800402GJ-211-UEN-A(ESC)
IC14
K4S641632N-LC75000
RA12
RTA03-4D103JTP
R53 100Ω
RTA03-4D101JTP
SW1 SKQKAKD010
SW2 SKQKABD010
SW3 SKQKABD010
SW4 SKQKABD010
SW5 SKQKABD010
SW6 SKQKABD010
SW7 SKQKABD010
SW8 SKQKABD010
SW9 SKQKAKD010
SW10 SKQKABD010
SW11 SKQKABD010
SW12 SKQKAKD010
S-ED(0:7)
S-EA(0:13)
D+3.3
D+1.5
GND